WHAT IS CLAIMED IS:

1. A bypass valve for a heat exchanger including a plurality of parallel tubular members having adjacent wall portions defining flow openings in communication to form flow manifolds, the bypass valve comprising: a housing having a hollow plug portion with opposed plug walls defining inlet and outlet openings therein, the plug walls being adapted to be sealingly mounted between selected adjacent tubular member wall portions to allow fluid flow respectively between said flow manifolds and said inlet and outlet openings; the housing also having an actuator portion located adjacent to the plug portion; and an actuator releasably mounted in the actuator portion and having a reciprocating plunger extending into the plug portion to block and unblock flow between said inlet and outlet openings.

2. A bypass valve as claimed in claim 1 wherein the actuator is a temperature responsive actuator having a central shaft mounted in the housing actuator portion and a reciprocating barrel portion forming said plunger.

3. A bypass valve as claimed in claim 2 wherein the actuator is a thermal motor adapted to extend axially upon being heated to a predetermined temperature and to retract upon being cooled below said temperature.

4, A bypass valve as claimed in claim 2 wherein the housing actuator portion includes a removable closure located remote from the plug portion, the actuator central shaft being attached to the removable closure.

5. A bypass valve as claimed in claim 3 or 4 and further comprising bias means located in the housing for urging the actuator to retract and the plunger to unblock the flow through the bypass valve.

6. A bypass valve as claimed in claim 1 wherein the housing plug portion opposed plug walls are flat, parallel side walls defining said inlet and outlet openings.

7. A bypass valve as claimed in claim 6 wherein said side walls are spaced apart a predetermined distance so as to determine the spacing between adjacent heat exchanger tubular members.

8. A bypass valve as claimed in claim 2 and further comprising a spring located in the housing actuator portion to urge the central shaft toward the housing plug portion.

9. A bypass valve as claimed in claim 4 and further comprising a spring located between the removable closure and the actuator central shaft to urge the actuator into the housing plug portion.

10. A bypass valve as claimed in claim 1 wherein the actuator includes a solenoid having a central actuator shaft attached to the plunger, the shaft extending upon energization of the solenoid, so that the plunger blocks flow between the inlet and outlet openings, and further comprising bias means for urging the actuator shaft to retract upon de-energization of the solenoid.

11. A bypass valve as claimed in claim 10 and further comprising a temperature sensor electrically coupled to the solenoid for activation of the solenoid when the temperature of the fluid going to the heat exchanger reaches a pre-determined temperature.

12. A bypass valve as claimed in claim 11 wherein the temperature sensor is a thermistor mounted on the plunger.

13. A bypass valve as claimed in claim 12 and further comprising an electrical control circuit mounted in the housing and electrically connected between the thermistor and the solenoid for controlling the movement of the plunger in accordance with the temperature sensed by the thermistor.

14. A heat exchanger comprising: a plurality of parallel, tubular members having adjacent wall portions defining flow openings in communication to form inlet and outlet manifolds for the flow of fluid through the tubular members; a bypass valve including a housing having a hollow plug portion with opposed plug walls defining inlet and outlet openings therein, the plug walls being sealingly mounted between selected adjacent tubular member wall portions to allow fluid flow respectively between said flow manifolds and said inlet and outlet openings; the housing also having an actuator portion located adjacent to the plug portion; and an actuator releasably mounted in the actuator portion and having a reciprocating plunger extending into the plug portion to block and unblock flow between said inlet and outlet openings.

15. A heat exchanger as claimed in claim 14 wherein the tubular members are formed of plate pairs having enlarged distal end portions joined together to form said inlet and outlet manifolds, said plug walls being spaced-apart flat, parallel side walls defining said inlet and outlet openings and being joined to adjacent enlarged distal end portions of the adjacent plate pairs.

16. A heat exchanger as claimed in claim 15 wherein said plug walls are spaced apart a predetermined distance so as to determine the spacing between adjacent heat exchanger tubular members.

17. A heat exchanger as claimed in claim 14 wherein the actuator is a temperature responsive actuator having a central shaft mounted in the housing actuator portion and a reciprocating barrel portion forming said plunger.

18. A heat exchanger as claimed in claim 17 wherein the actuator is a thermal motor adapted to extend axially upon being heated to a predetermined temperature and to retract upon being cooled below said temperature.

19. A heat exchanger as claimed in claim 14 wherein the actuator includes a solenoid having a central actuator shaft attached to the plunger the shaft extending upon energization of the solenoid, so that the plunger blocks flow between the inlet and outlet openings, and further comprising bias means for urging the actuator shaft to retract upon de-energization of the solenoid.

20. A heat exchanger as claimed in claim 19 and further comprising a temperature sensor electrically coupled to the solenoid for activation of the solenoid when the temperature of the fluid going to the heat exchanger reaches a pre-determined temperature.